

# Dong Heon Han

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Robotics Department, University of Michigan, Ann Arbor, MI 48109, USA

*Robot Collectives | Artificial Intelligence | Soft Robotics*

## EDUCATION

- **University of Michigan – Ann Arbor** 2029  
*PhD in Robotics* Ann Arbor, MI
- **University of Michigan – Ann Arbor** 2025  
*MS in Mechanical Engineering* Ann Arbor, MI
- **Georgia Institute of Technology** 2021  
*BS in Mechanical Engineering* Atlanta, GA

## EXPERIENCE

- **University of Michigan | Robotics Department** May 2025 - Present  
*Research Assistant* Ann Arbor, MI
- **University of Michigan | Mechanical Engineering Department** Aug 2023 - May 2025  
*Research Assistant* Ann Arbor, MI
- **Republic of Korea Army** Jan 2022 - July 2023  
*Signal Specialist* Korea
- **Seoul National University | Biosystems Engineering Department** Aug 2021 - Dec 2021  
*Research Assistant* Seoul, Korea
- **George W. Woodruff School of Mechanical Engineering** Aug 2019 - Aug 2021  
*Research Assistant* Atlanta, GA
- **Korean Institute of Machinery and Materials** Jun 2018 - Aug 2018  
*Research Assistant* Daejeon, Korea

## PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [C.1] R. Zuo, M. Mehta, **D.H. Han**, D. Bruder. "Embedded Valves for Distributed Control of Soft Pneumatic Actuators". 2024 IEEE International Conference on Intelligent Robots and Systems (IROS)
- [C.2] **D.H. Han**, S.J. Byeon, K.D. Kim, G.H. Han, M.H. Cha, Y.J. Park. "Development of Path Tracking Control Algorithm for Tractor Autonomous Driving". 2021 Korean Society for Agricultural Machinery Conference
- [P.1] **Blowers With Variable Nozzles**. US 11668311 B2. Issued June 6, 2023.
- [T.1] **D.H. Han**. "Towards a universal sensing framework for soft robots" 2025
- [S.1] **D.H. Han**, M. Mehta, R. Zuo, Z. Wanger, and D. Bruder. "An Enhanced Proprioceptive Method for Soft Robots Integrating Bend Sensor and IMU"
- [S.2] **D.H. Han**, D. Bruder. "Shape-Morphing Strain Sensing Structure for Enhanced Proprioception in Soft and Wearable Robots"
- [S.3] **D.H. Han**, X. Huang. "Optimized Shape Morphing and Adaptive Locomotion Control in Centimeter-Scale Untethered Soft Robots"

## HONORS AND AWARDS

- **VIP Innovation Competition, 1st Place in Hardware, Devices & Robotics Track** Apr 2021  
*Georgia Institute of Technology*
  - Awarded to the most innovative and active research team in Georgia Tech
- **President's Undergraduate Research Award** Oct 2020  
*Georgia Institute of Technology*
  - Research excellence scholarship as an undergraduate researcher at Georgia Tech
- **Georgia Korean American Grocers Association Scholarship Award** Dec 2016  
*KAGRO*
  - Awarded for academic excellence and leadership in community service
- **Kappa Mu Epsilon** May 2018  
*Mathematics honor society*

## SERVICE

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- **Reviewer**

- IEEE Transactions on Mechatronics
- IEEE Robotics and Automation Letters
- IEEE International Conference on Robotics and Automation (ICRA)
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

## REFERENCES

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1. **Dr. Steven Ceron**

Assistant Professor, Robotics Department  
University of Michigan – Ann Arbor  
Email: sceron@umich.edu

2. **Dr. Daniel Bruder**

Assistant Professor, Mechanical Engineering Department  
University of Michigan – Ann Arbor  
Email: bruderd@umich.edu

3. **Dr. Ye Zhao**

Assistant Professor, George W. Woodruff School of Mechanical Engineering  
Georgia Institute of Technology  
Email: ye.zhao@me.gatech.edu